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NSERC Contact

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A Challenge and an Opportunity by Peter Morand, President of NSERC

The first article in this issue brings you details of how the research community can participate in a major review of federal science and technology expenditures taking place this summer. The public consultation phase will be led by Dr. Jon Gerrard, the Secretary of State (Science, Research and Development).

The existence of this review and the extensive consultation planned emphasize the importance the government places on research, as do the government's previous efforts to protect the budgets of the granting councils. It is, therefore, vital for Canada's research community to take advantage of every opportunity to participate. In today's climate, the outcome of any public review cannot be taken for granted. Many public interests are competing for diminishing federal dollars. The government needs to hear the best arguments for the federal support of university research, and Council needs the help of the research community to make the most convincing case for maintaining and enhancing our research and training efforts.

During the summer, Council will similarly be put to the test. Just before this issue of *CONTACT* was being finalized, we learned the full details of a separate government-wide, program-by-program review in which we must participate. In this review, the spending of almost every federal department and agency is on the table. The objective of the review, as announced in last February's federal budget, is "to reduce or eliminate lower priority activities and ensure that the government's diminished resources are directed to the highest priority requirements and to those areas where the federal government is best placed to deliver services."

Government agencies must apply six basic tests to each program. Council has added a seventh, to reflect the Strategy recently endorsed by Council. These tests are:

1. public interest (Does the program area or activity continue to serve a public interest?);
2. role of government (Is there a legitimate and necessary role for government in this program area or activity?);

3. federalism (Is the current role of the federal government appropriate, or is the program or activity a candidate for realignment with the provinces?);
4. partnership (What activities or programs should or could be provided in whole or in part by the private or voluntary sector?);
5. efficiency (If the program continues, how could its efficiency be improved?);
6. affordability (Is the resultant package of activities/programs affordable within the fiscal constraint?);and,
7. how well does the program support the NSERC Strategy?

Industry Canada has established a rigorous timetable for Council's contribution to this review. Our analyses must be telescoped into a short period covering the balance of July and early August. During the next few weeks NSERC staff will be working closely with Council members and the chairs of our permanent committees to meet the tight deadline imposed on us. Unfortunately, this timing will preclude some of the broad-based consultation that Council had intended to undertake this fall concerning operational implementation of the NSERC Strategy. Nevertheless, thanks to the S&T review, there will be alternate and ample opportunity for substantive community input.

In both reviews, the key to success will be in generating positive messages about what we do. I offer the following suggestions on how the community can work with the Council, through the S&T review, to make the most effective case.

First, we should welcome scrutiny. Canadians expect greater accountability from their public institutions, and they want results. Just as many universities are adapting to meet new realities, NSERC has also taken substantial measures to simplify operations and make expenditures more effective. All of us will be asked, and expected, to do more.

Second, we should be positive. The onus is on us to explain not just what we as a research community expect from government, but also what we return to those who fund us. It is also very important that the public receive an accurate view of the breadth of research activities that take place in modern universities - the integration across disciplines, interrelationships with the economy and the access it offers to international knowledge. Our arguments are enormously enhanced when the enterprise is presented in its reality, as a whole that is vastly greater than the sum of its diverse parts.

Third, we should talk in the most concrete terms about what we do and why we do it. Abstract defences of "the importance of research" are far less convincing than examples of how our activities contribute to everyday life and issues preoccupying Canadians. From our direct experience, we must explain the importance of new ideas and creativity; we can show how our training results in flexible, highly-qualified graduates who are

empowered with the right skills to adapt and thrive in a competitive knowledge-based economy.

Finally, we must seek consensus. Our challenge is to agree on what is important to the entire research community and speak as much as possible with one voice.

In this final regard, Council believes that open lines of communication with the research community are critical. As a result of lengthy discussion at our last meeting, we are looking at better ways to communicate information about changes and developments in our programs and promote exchanges with the community.

I am confident that we will meet the coming tests with imagination and enthusiasm, and that NSERC will measure up in the reviews. By presenting university research in a way that all Canadians can relate to and approve of, and by demonstrating how Council, the research community, and the government are working towards the same goal, I am convinced we have everything to gain.

Launch of Federal Science and Technology Review

On June 28, The Minister of Industry and the Secretary of State (Science, Research and Development) announced a wide-ranging review of the federal investment in science and technology.

The government is actively inviting the research community, business, labour, and other interested Canadians to become part of the review process. In tandem with this extensive public consultation, there will also be an internal evaluation of the science and technology activities of federal departments and agencies (including NSERC), as well as an independent assessment of these activities by the National Advisory Board on Science and Technology (see following article).

In inviting public participation, the Minister stated:

"Recognizing that the earth on which we live has finite limits, the decades ahead will present extraordinary challenges and opportunities. From the largest urban centres to the most remote rural locations, Canada needs to become a nation of experimenters, a nation of entrepreneurs and a nation of innovators.

"At the Prime Minister's request, we are leading a review to determine the most effective way for the government to invest in science and technology to achieve three important goals: the creation of wealth and jobs within the context of sustainable development, the enhancement of the quality of life, and the

advancement of knowledge."

NSERC President Peter Morand said that the review provides the university research community with an excellent opportunity to share its views on funding mechanisms and to communicate how its research and training has contributed to Canada's growth and development. "It is an ideal forum to convey to Canadians the importance of what it is we do, what we have achieved so far, and the enormous potential for future contribution in the context of the government's objectives."

Participation may take the form of written submissions via mail, FAX or Internet, membership in an Internet discussion group (can.ai) or attendance at one of a series of local regional and national conferences. Many of the local workshops, which will run during July and August, will be hosted by universities, giving NSERC grant and scholarship holders an excellent opportunity to provide their input.

Schedules and consultation information may be obtained from the Secretariat for Science and Technology Review, Industry Canada, 235 Queen Street, Ottawa, Ont. K1A 0H5. Tel: (613) 943-7034; FAX: (613) 993-4812; Internet: S&T.Review@ISTC.CA. Briefs or comments may be e-mailed to this address. Submissions must be received by the Secretariat no later than August 20 in order for their ideas to be incorporated into background for the regional and national conferences scheduled for later in the fall.

Copies of the consultation documents, Building a Federal Science and Technology Strategy, and a companion resource book can be ordered from the Industry Canada Distribution Centre (613) 954-5716. Information about electronic retrieval of these documents can be obtained from the Secretariat e-mail address given above.

Science and Technology Review Public Consultation Process

Local Workshops

Peterborough	July 12
Sherbrooke	August 2
Pinawa	July 14
Saint-Hyacinthe	August 3
Edmonton	July 19
Quebec City	August 4
Calgary	July 20
Rimouski	August 5
Kelowna	July 21
Hull	August 8
Victoria	July 22
Hamilton	August 9
Halifax	July 26

Waterloo(*)	August 23
Fredericton	July 27
Windsor	August 11
Charlottetown	July 28
Whitehorse	August 15
Corner Brook(*)	July 29
Winnipeg	August 25
Ottawa	August 29

Regional Conferences

Vancouver	September 1-2
Saskatoon	September 8-9
Toronto	September 15-16
Montreal	September 22-23
St. John's	September 29-30

National Roundtable

Ottawa	October 14

(*) To be confirmed

NABST Report Helps Set Framework for S&T Review

A new report by the National Advisory Board on Science and Technology (NABST) provides further context to the S&T review. Presented to the Prime Minister in February and released in June, the report recommends that the federal government manage its $6 billion annual investment in S&T "as a distinct strategic asset." It states that managers of federal organizations should be held accountable for implementation of an S&T strategy that meets the objectives of the government. The report was prepared by the Board's Committee of Federal Science and Technology Priorities.

The report urges two primary objectives for S&T programming: "the development of a knowledge-thirsty society, and market-driven technology development." Finally, the advisory board recommends that the government move quickly to establish a system for setting S&T priorities within and among federal departments and agencies. "After two or more decades, the government still lacks the capacity to determine whether one S&T activity better meets government objectives than another and to reallocate S&T resources accordingly."

What the NABST report says about NSERC...

Development of a Knowledge-thirsty Society

The business of NSERC is support for the creation and dissemination of knowledge. The Committee was favourably impressed by NSERC's efforts to encourage collaborative and strategic research. The Council makes periodic efforts to reallocate research funds to areas where the need for research is perceived to be the greatest; i.e., it prioritizes. In making an assessment of relative need, NSERC officials meet with business development officers in universities and work with officials of SSHRC. In addition, the peer review system is being used to evaluate not only the scientific value of research but also the value of the research to society. However, the Council would oppose any attempt to impose a relevance-based allocation among research fields. The Committee also endorses NSERC's considerable efforts to support the development of the highly qualified personnel on which the creation of new knowledge depends.

Market-driven Technology Development

NSERC is responsive to the needs of the university research community. The Council also consults with industry in determining strategies, and funds programs to build linkages between industry and universities. The Committee had some concerns about the Council's capacity to act independently of historical precedent in the allocation of grants; i.e., its flexibility in responding to changed circumstances. This concern is shared by the Council, as a new allocations system is under development. The Committee would also like to see a more precise definition of NSERC clients.

Competitiveness

NSERC is a key player in the funding of R&D, in the training of highly qualified personnel and in the diffusion of knowledge and technology; all of these are necessary for industrial growth and renewal. The Committee observes, however, that industrial competitiveness is often a fortuitous benefit of NSERC-supported research, rather than the output of a deliberate strategy. It is fully appropriate for a University Granting Council to adopt such an approach, but it naturally limits its responsiveness to this criterion.

Sustainable Development

NSERC provides many research grants in support of the scientific foundation for progress in sustainable development. In addition, the Council participates in shared programs on Eco-Research and Global Change. However, sustainable development has not yet acquired disciplinary status within the Council, nor is it an element by which the Council allocates funds for research programs.

NSERC Awards

Dr. Alan Davenport, Director of the University of Western Ontario's Boundary Layer Wind Tunnel, proudly accepted the 1994 Canada Gold Medal for Science and Engineering at the awards ceremony in Ottawa on June 15. Remarking that he gets "an enormous kick" out of what he is doing, Dr. Davenport thanked the many people who have given him their support over the years.

In his address to representatives from academia, government and industry, the wind engineer explained how he came to be honoured that night. He is fascinated by the wind in its many forms. Not only is it both a positive and negative phenomenon but it is a principle source of power. Dr. Davenport gained international recognition for his work on the World Trade Centre and the establishment of the Boundary Layer Wind Tunnel at the University of Western Ontario.

Referring to NSERC's peer review system and the breadth and accessibility of its committees and its council, he commented on the adaptability and responsiveness of the Canadian research granting system. Speaking of today's times of change, Dr. Davenport said: "I feel that across the board - not only in wind engineering - there is the urgent need to make the connections between the scientific research, engineering and development and the user and the marketplace. I believe that recent changes and initiatives by the NSERC Council have tried to do this. I think it is the right way to go."

The text of his speech can be obtained by contacting NSERC's Communications Division by Phone: (613) 995-5992; Fax: (613) 943-0742; or E-Mail: COMM@NSERC.CA.

Top Photo: Peter Morand, President of NSERC, Alan G. Davenport, Canada Gold Medal Recipient, and Jon M. Gerrard, Secretary of State (Science, Research and Development).

Middle Photo: E.W.R. Steacie Fellows, David B. MacFarlane (top row, second from left), Mark Lautens, Peter T. Boag and Christian Roy, with Peter Morand and Jon M. Gerrard.

Bottom Photo: Doctoral Prize Winners, Fran‡ois Tropper (top row, second from left), Marc Soucy, Wei Kong and James G. Owen, with Peter Morand and Jon M. Gerrard.

1994 Competition Results Research Grant Programs

The following table summarizes the results of the 1994 grants competition. The figures will change throughout the year since a number of decisions are still pending. Those requiring upto-

date figures should contact the Council's Research Grants Directorate.

Grant Selection	Res. Gr.(*)		Equip.(**)		Infra.		Total Fund.	
	No.	$000	No.	$000	No.	$000	No.	$000
Animal Biology (01)(***)		204					2	204
Animal Biology	237	6138	21	660	1	20	259	6818
Animal Physiology	196	6757	30	934	1	10	227	7700
Cell Biology & Genetics (02) (***)	4	235					4	235
Cell Biology	250	8236	54	1292			304	9528
Molec. & Develop. Genetics	164	6602	31	540			195	7141
Plant Biology	336	10568	68	1818			404	12385
Evolution & Ecology	453	12795	46	1028			499	13823
Psychology	332	8912	31	595		38	365	9544
Solid Earth Sciences	292	8782	24	899	16	589	332	10270
Env. Earth Sciences	307	7809	39	1440	9	255	355	9503
Inorg. & Org. Chemistry	265	10597	55	4116	28	713	348	15426
Anal. & Phys. Chemistry	292	10269	46	2994	4	134	342	13397
Space & Astronomy	149	4377	17	304	8	731	174	5412
Subatomic Physics	145	12100	22	3711	14	4875	14	4875
Condensed Matter Physics	223	6783	21	1312	4	138	248	8233
General Physics	136	3992	20	907		40	158	4938
Pure & Applied Math. (16)(***)	178	2621				65	180	2686
Mathematics - A	214	3062	5	112	6	79	225	3252
Mathematics - B	149	2149	6	140	4	67	159	2356
Statistical Sciences	234	2872	13	333	16	452	263	3657
Comp. & Info. Sciences	501	10721	33	1208	20	1586	554	13515
Electrical Engineering (11)(***)	3	78					3	78
Commun. Computers & Comp. Eng.	292	6387	21	1032	8	196	321	7615
Electromag. & Electric. Syst. Eng.	250	5916	21	982	6	125	277	7023
Industrial Engineering	229	4348	21	689	3	215	253	5253
Chem. & Met. Engineering	424	12141	47	2223	1	25	472	14389
Civil Engineering	500	11423	41	1620	7	339	548	13382
Mechanical Engineering	483	11132	47	1830	4	61	534	13023
Interdisciplinary	38	970	1	41	48	3202	87	4213
Sel. Cttee. on Research Grants			17	6676	6	222	23	6898
Sel. Cttee. in Life Sciences			5	852	1	38	6	890
Sel. Cttee. in Computing & Eng.			5	607			5	607
Sel. Cttee. in Math. Sciences			5	259			5	59
Total (****)	7278	198 976	813	41 154	221	14 214	8312	254 344
* Includes individual group project URF and WFA.								
** Equipment major equipment and major installations.								
*** Instalments only.								
**** Some equipment grants were paid through 1993 funds.								

New in 1994 in the Research Grants Program

Deadlines

Starting this fall, there will no longer be two deadline dates

(Oct. 15 and Nov. 1) for "Research Grant applications." All such applications, including those from first-time applicants and those submitted by applicants applying to or already supported by MRC or SSHRC, must be received at NSERC by November 1. However, the deadline for applications for Women's Faculty Awards remains October 15, and October 1 remains the deadline for Major Equipment, Major Installation and Infrastructure applications.

Eligibility

The revised eligibility conditions are summarized in the article on p. 12. For the complete description, see the new Researcher's Guide, which will be in the universities in August.

Four-Year Grants

The normal duration for Research Grants has been increased from three to four years. This will reduce the workload on applicants, committee members, referees and NSERC staff. Those submitting applications this fall must therefore include a four-year budget. The five-year grant will be maintained.

Certificates

Applicants whose research involves the use of animals, human subjects, radioactive materials, hazardous compounds or biohazards should consult their research grants office or the new Researcher's Guide regarding changes in the procedures for certification. In brief, NSERC no longer requires the submission of certificates with grant applications. However, applicants must still abide by the conditions outlined in the Guide. Universities will only release funds after all these requirements have been met.

Completeness of Applications

We have simplified the application process: there are fewer and more user-friendly forms to fill in, fewer related documents to submit. In return, applicants are expected to submit complete applications. "Incomplete" applications will be rejected.

E-Mail

The Research Grants directorate's new electronic mailing addresses are as follows:

resgrant@nserc.ca - Research Grant programs and policies

collab@nserc.ca - Collaborative Project Grants program and policies

coord@nserc.ca - Site visit information.

Deadlines to Be Strictly Enforced

In the last issue of *CONTACT (Spring, 1994)*, information was provided on some of the changes resulting from the ongoing re-engineering exercises at NSERC. One important change to affect the research community immediately is the strict enforcement of all competition deadlines.

Applications received at NSERC after the deadline will be rejected.

Only under exceptional circumstances beyond the control of the applicant, such as illness or accident, will NSERC consider late applications. Negotiations regarding late applications will be handled through the universities' research grants offices or the scholarships liaison offices. There will be no further direct negotiation between the applicant and NSERC staff. The case for accepting a late application must be made by the research grants officer (RGO) or the scholarships liaison officer (SLO).

In the Scholarships and International programs, third party material may be accepted at a later date provided the SLO informs NSERC beforehand on behalf of the student/applicant who is expected to meet regular application deadlines.

To ensure fairness and consistency, and to facilitate the liaison with the university, NSERC will appoint a staff member to negotiate exceptional cases with research grants officers or scholarships liaison officers.

New Literature for Grants Programs

NSERC is introducing new literature for its grants programs later this summer. The Awards Guide, Personal Data Form (form 100), and Application for a Research Grant (form 101) have all been completely revamped. In addition, the Discipline Codes, Area of Application Codes, Techniques and Instrumentation Codes, and Industrial Classification Codes have been put together in a Code Book. All of the above will be available both in print and on Internet via the NSERC Gopher.

Applicants should read the new Researcher's Guide carefully before filling out their application forms, and retain it for future use. The instructions on the forms have been limited to information applicants need to fill out the forms, and the detailed program and financial information has been put in the Guide.

The revised Personal Data Form (form 100) will make it easier for those who apply to more than one program or as a member of a team to keep track of their personal records.

The new Application for a Grant (form 101) is the result of NSERC's efforts to rationalize its procedures and simplify the application process. The form comprises 26 different forms that were previously needed to apply to various NSERC grant programs.

The forms were designed to make it easier for applicants to fill them out using their computers and to print them on their laser printers.

The two forms and the Code Book have been put together in a kit. Separate copies of each will also be available at university research grants offices. The streamlined approach to NSERC program literature will help the universities maintain their inventory of forms and guides and help NSERC control the production costs of forms.

The new material, which is dated 1994, will be in the universities in late August and must be used by those applying in the next grants competition. Applications submitted on the "old forms" will be rejected by NSERC.

New Option for Postgraduate Scholars

Students wishing to gain industrial experience during their postgraduate training can take advantage of a new NSERC program designed to assist them to undertake their thesis research in an area of interest to an industrial sponsor. The ideal project will match the skills of the student, the interests of the faculty member and the needs of the company. Normally, the scholar will be expected to spend a minimum of 20% of research time at the company on activities related to the thesis project. Funding for the new Industrial Postgraduate Scholarships will come from both NSERC and the company. NSERC will contribute a stipend of $12,500 per year for two years. The sponsoring company will make a minimum cash contribution of $5,000 per year in support of the student. For the initial two-year period, NSERC will make available a total of 300 scholarships through this program. These awards must be taken up between September 1, 1994 and August 31, 1996.

Two types of award are available: a scholarship for the first and second years of postgraduate study and a scholarship for the third and fourth years of postgraduate study. The NSERC contribution to the stipend for these awards is the same.

Universities participating in the program have received an allocation of awards for the two-year period. In exchange for helping to administer the awards, the universities will have a good deal of freedom in the selection of scholarship winners and in the timing of awards. There are no application deadlines for the program; universities may submit nominations to NSERC staff at any time during the two-year period. Applications will be reviewed and decisions made within three

weeks of receipt of complete documentation.

If you are interested in finding out more about the program please contact the Dean of Graduate Studies at your university or the Scholarships and Fellowships Division at NSERC.

Changes to International Programs

Bilateral exchanges

NSERC has streamlined procedures for requests to the bilateral exchange program.

The semi-annual competition for support of research visits has been abandoned and applications may now be submitted at any time. This will enable NSERC to respond to opportunities for collaboration as they arise. Review procedures have also been simplified.

The program is based on agreements with research councils in the U.K., Germany, Switzerland, Brazil, China, Japan and the Republic of Korea. It encourages mobility between researchers in Canada and the partner countries for the purposes of joint research or fact finding, and for bilateral workshops. The nature of activities supported depends on each agreement, and may be limited by a number of factors.

International workshops (new)

The exchange program has been extended to include a new bilateral workshop component. The workshops permit up to 8 expert researchers from each country to meet for a few days to discuss developments in a specific research field of mutual interest. They can be held in Canada or in the other country. NSERC is now prepared to consider support for a limited number of such workshops. Initially, these will focus on Mexico, France, Germany, China, Japan, Taiwan and the Republic of Korea, though workshops with other countries will be considered, if the funding agency in that country is interested and prepared to share the costs.

The Canadian applicant is expected to organize the meeting with his or her foreign counterpart, administer any funds provided and report on the outcome of the meeting. Applications may be submitted at any time. If accepted by NSERC, the workshop topic proposal will be sent to the appropriate granting body in the other country for its consideration and support.

For application guidelines contact the International Division, NSERC, Ottawa, Ontario K1A 1H5; Tel: (613) 995-1818; Fax: (613) 996-2589; e-mail: DMC@NSERC.CA.

No new project awards from Japan Fund

Due to a reduction in funding from the Japan Science and Technology Fund, NSERC is unable to accept proposals for new projects in 1994. Ongoing commitments will be honoured and NSERC will continue to accept requests for Japanese language training and for short visits to Japan.

1994-95 Canada International Fellowships Competition Results

The fifth Canada International Fellowships competition was held in February 1994. Successful candidates were offered either a Canada International Fellowship or a NATO (North Atlantic Treaty Organization) Science Fellowship. Both awards give recent Ph.D. graduates from abroad the opportunity to conduct research in a Canadian university.

The Selection Committee reviewed 170 nominations. It recommended 79 Canada International Fellowships and 10 NATO Science Fellowships to candidates from 39 countries: 33 from western Europe, 24 from Asia, 13 from Central or Eastern Europe, 10 from Oceania and 9 from North and Central America.

The fellowships were in the following disciplines: 18 in biology, 17 in physics and astronomy, 17 in chemistry, 13 in engineering, 9 in mathematics and statistics, 9 in computer science, 5 in earth sciences and 1 in psychology.

Fellowships are tenable for one year and may be renewed for a second year. Fellows work under the supervision of NSERC grant holders.

The application deadline for the next competition for these awards is November 15, 1994. Application forms will be available in university research grants offices by mid-August.

Results of 1994 Scholarship and Fellowship Competition

NSERC's three scholarship and fellowship selection committees reviewed 2,924 applications for postgraduate scholarships (PGS) and 1,066 applications for postdoctoral fellowships (PDF) during the February 1994 competition. This represented an 8.3% increase in the number of PGS applications over the previous year and a decrease of 1.8% in the number of PDF applications.

The PGS and PDF competition results are summarized in the

table.

For the second year in a row, the competition for postdoctoral fellowships was also extremely tight. The most significant negative change, however, occurred in the postgraduate scholarship competition, where success rates were substantially lower than in previous years. Council's success rate projections for 1994 were disrupted primarily by a large and unexpected takeup of offers from the 1992 and 1993 competitions. Since both new awards and commitments are funded from the same budget, it meant that while the total number of scholars (new and continuing) supported by NSERC in 1994-95 remains at about the same level as in previous years, the number of new scholarships available this year had to be reduced by approximately 500. This higher acceptance of earlier awards is likely linked to the poor economic situation and job market in 1993. We do not anticipate that this situation will be repeated next year. Also contributing to the constraints on the postgraduate scholarship budget, but to a much lesser extent, were the introduction of the new Industrial Postgraduate Scholarships Program (a program that will eventually increase the overall number of scholarships available), small adjustments to cover budget shortfalls in the Women's Faculty Awards and Postgraduate Scholarships in Science Librarianship and Documentation programs, and decisions by some selection committees to transfer a limited number of awards from their PGS quota to their PDF quota.

A separate, five-member multidisciplinary committee reviewed 225 nominations, received from 47 Canadian universities, for Council's prestigious 1967 Science and Engineering Scholarships. These are awarded to outstanding students who, in addition to superior scholarship and promise of research ability, demonstrate leadership potential, excellent verbal and written communication skills and interests and general knowledge outside of their academic studies. Awards were offered to 55 students from 21 universities (24.4% success rate).

PGS and PDF 1994 Competition Results

Discipline Committee	Award Type	Number of Applications	Number of Awards	Success Rate (%)
Engineering/ Computer Science	PGS	1107	554	50.0
	PDF	236	43	18.2
Life Sciences/ Psychology	PGS	1047	389	37.2
	PDF	393	85	22.1
Mathematics/ Physical Science	PGS	770	395	51.3
	PDF	437	101	23.1
TOTAL	PGS	2924	1338	45.8
	PDF	1066	229	21.5

Research Update

Quebec Hydrology Statistics Chair a First

Better prediction of floods, unusual runoff conditions and the resultant risks to hydro production and dam construction is the focus of a chair established by NSERC in partnership with Hydro-Québec at the Water Research Unit of Quebec's Institut national de la recherche (INRS-Eau) at Sainte-Foy, Quebec.

The research program is designed to help Hydro-Québec acquire the knowledge to manage some of the more unpredictable events that challenge its hydro network, which is one of the world's largest. Every megawatt gained from improved predictions, it has been estimated, could be worth as much as $800,000 to the utility. The chair also offers an improved training environment for young researchers and the chance for Canada to increase the supply of new professionals in the field. Overall, statistical hydrology is not well represented in Canadian universities and expertise is widely dispersed.

The chair is headed by Dr. Bernard Bobée, a respected hydrologist. His research activities involve numerous collaborators from INRS-Eau and Hydro-Québec, and from across Canada and abroad.

NSERC and Hydro-Québec will each contribute $600,000 over the next five years with INRS putting in over $1.7 million.

Lithoprobe funding renewed

Following an international evaluation, NSERC has awarded $21 million to the fourth stage of the 10-year old LITHOPROBE project. Lithoprobe is the largest collaborative and multidisciplinary, national geoscience project that Canada has undertaken.

The study involves scientists from virtually every university earth science department in Canada, all relevant scientific divisions of the Geological Survey of Canada, most provincial or territorial geological surveys, and petroleum and mining exploration companies. Among them are about 300 students, postdoctoral fellows, and research associates.

The project has been probing North America's lithosphere, the mosaic of"plates," amalgamated, sorted, compressed and modified over billions of years into the present continent. The research is helping to answer fundamental questions of earth science research: How did a piece of Africa come to form eastern Newfoundland? Where did thousands of kilometres of ocean floor disappear to under our west coast? What causes earthquakes and volcanoes in Canada? Where did the Northwest Territories' diamonds come from?

LITHOPROBE's principal scientific and operational components centre on a series of 10 study areas or transects. They straddle important geological boundaries critical for understanding the tectonic history of the continent. The key method for deep investigations is the seismic reflection

technique which has been adapted from the oil industry's relatively shallow investigations of sediments. The method has been adapted for use to great depths and for crystalline rocks. In a further refinement, it is also being developed into a new tool for the Canadian mining industry enabling it to "see" beyond the narrow confines of small boreholes, and to explore below the known extent of mineral deposits.

By the completion of the latest phase, LITHOPROBE will have investigated almost all the geotectonic processes and structures present in the Canadian lithosphere. A global synthesis of results from all transects will document the evolution of a continent and establish a model of evolutionary history that will be of value for other studies around the world.

For further information, maps and other illustrations, as well as contact persons and a brochure about LITHOPROBE, please contact: Horst Heise, 3516-Button Rd. NW, Calgary, AB T2L 1M9; Tel: (403) 282-1404 Fax: (403) 289-6925

Eligibility Criteria Re-defined

Ad hoc Committee Membership

Dr. Robin Armstrong, UNB, Chair
Dr. Glen Caldwell, UWO
Mr. Ron Erickson, Calgary, Alta.
Dr. Don Roy, TUNS
Dr. François Tavenas, McGill
Dr. Bill Tupper, Carleton

In June 1992, on the recommendation of the Committee on Research Grants (CORG), Council struck a Task Force to make recommendations on the eligibility of individuals to apply for NSERC grants.

In undertaking its review, the Task Force surveyed all university research grants offices to obtain information on new applicants, the nature of the positions and the growth areas in each institution) and to ascertain priorities concerning tenured, tenure-track, and non-tenuretrack positions.

An ad hoc committee of Council considered the Task Force's report together with input from the Committee on Research Grants and the Committee on Targeted Research.

On the recommendation of this committee, Council has adopted the following changes to the eligibility criteria for individuals to apply for NSERC grants, effective September 1, 1994. For a complete description of eligibility requirements, consult the new *Researcher's Guide* being published this summer.

- at the time of application the individual must hold or have accepted a firm offer of a tenured or tenure-track appointment or an academic appointment with a minimum term of three years;
- the appointment must be ratified by the person or body responsible for approving academic appointments in accordance with university statutes;
- the responsibilities of the position must require that: - the individual engage in research that is not under the direction of another individual, and - the individual engage in the training of students enroled in a degree program or of postdoctoral fellows. ("Note:" Applicants holding part-time, honorary, emeritus or adjunct status positions must also meet these position criteria.)
- persons holding "full-time appointments in foreign institutions are not eligible" to apply for or hold NSERC grants.
- Canadian university researchers on an extended leave of absence (in excess of one year) are not eligible to hold grants beyond the first year of absence, unless the greater part of their time (i.e., at least two academic terms) is spent at an eligible institution.

Over the coming months, the ad hoc committee will examine the need for changes in the eligibility of individuals holding an adjunct appointment.

Allocation Update, Research and Infrastructure Grants

As previously reported in *CONTACT (Fall 1992)*, the procedure for allocating Research and Infrastructure Grants program funds to Grant Selection Committees (GSCs) is being changed. The following is a brief update.

There has been significant progress over the past few months. The Allocations Committee met for the first time in December 1993 and provided comments to the GSCs on their draft submissions. NSERC staff prepared and distributed reports on: Highly Qualified Personnel, Cost of Research and Discipline Dynamics. GSCs are currently sending in their comments on the staff reports. Peer review of the final GSC reports slated for the fall is now being organized; GSCs have already submitted a list of potential referees. The Allocations Committee will meet during the first week of December to review all the material submitted and to make recommendations to Council on the reallocation of available funds. The exercise will be completed in January 1995 when Council makes its decision on the final allocations. At its meeting in June, Council decided that up to 10% of the Research and Infrastructure Grants budget for the 1995-96 to 1998-99 time period will be available for reallocation (i.e., approximately $21 million may be reallocated and phased-in over the four-year period).